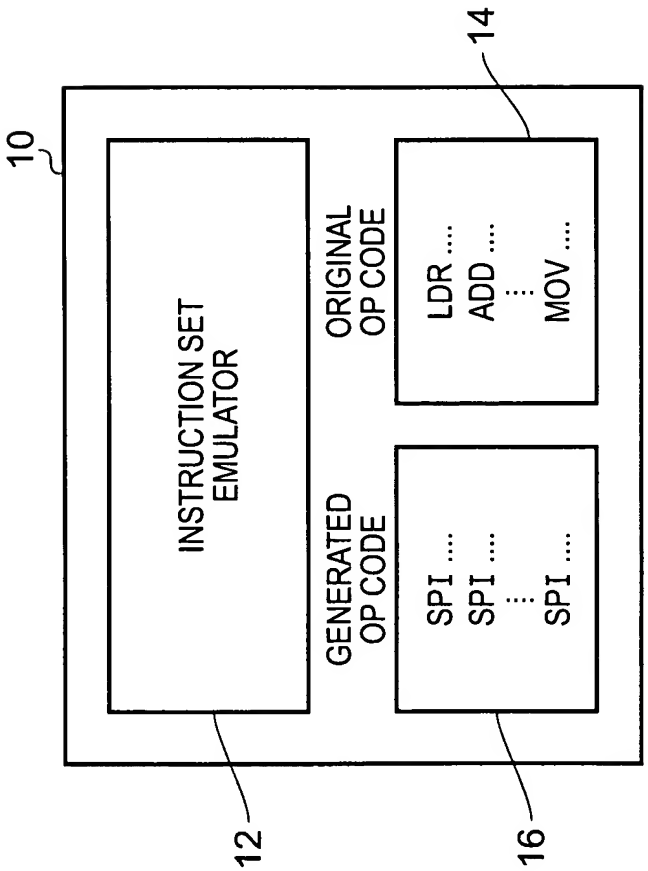

FIG. 1 (Prior Art)

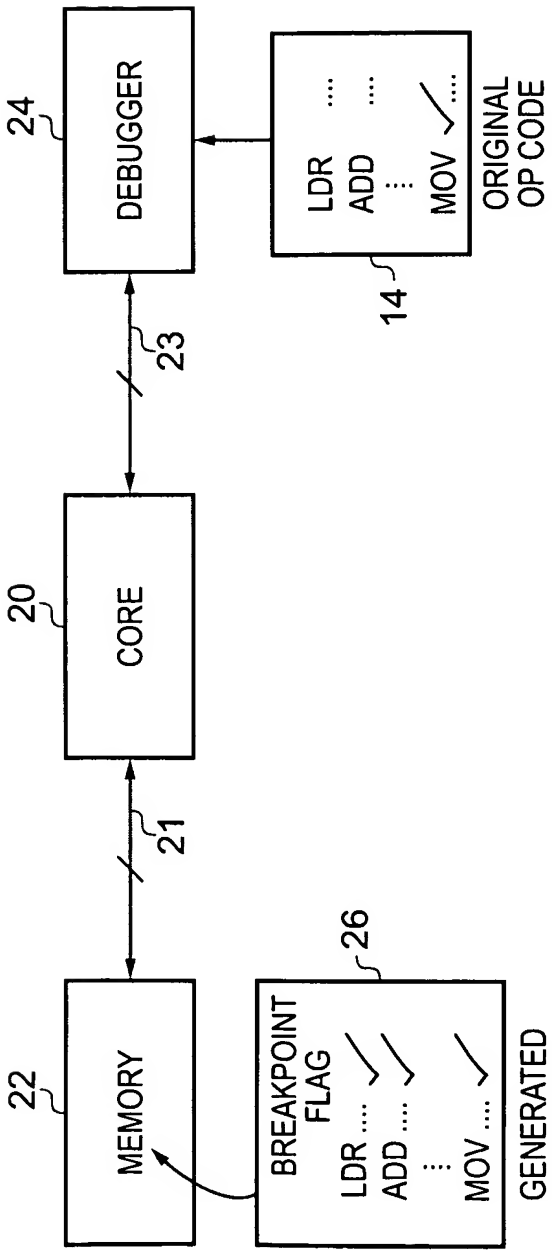

FIG. 2 (Prior Art)

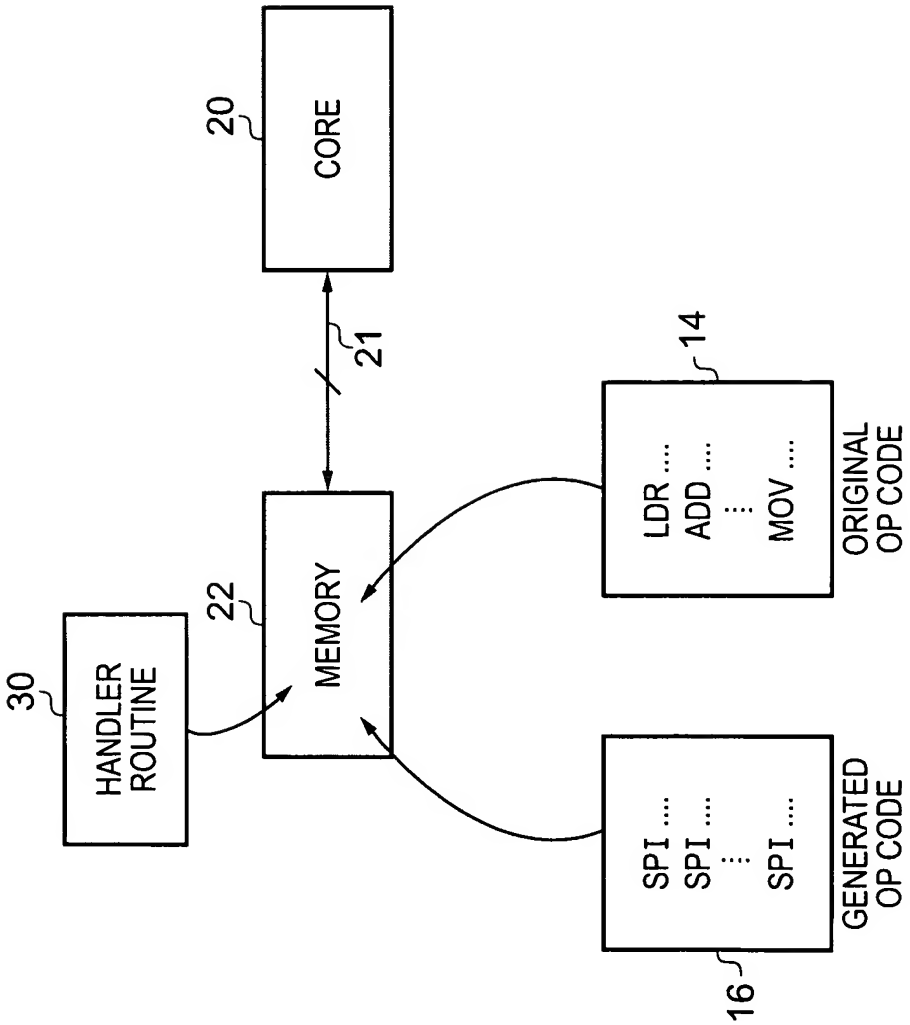

FIG. 3 (Prior Art)

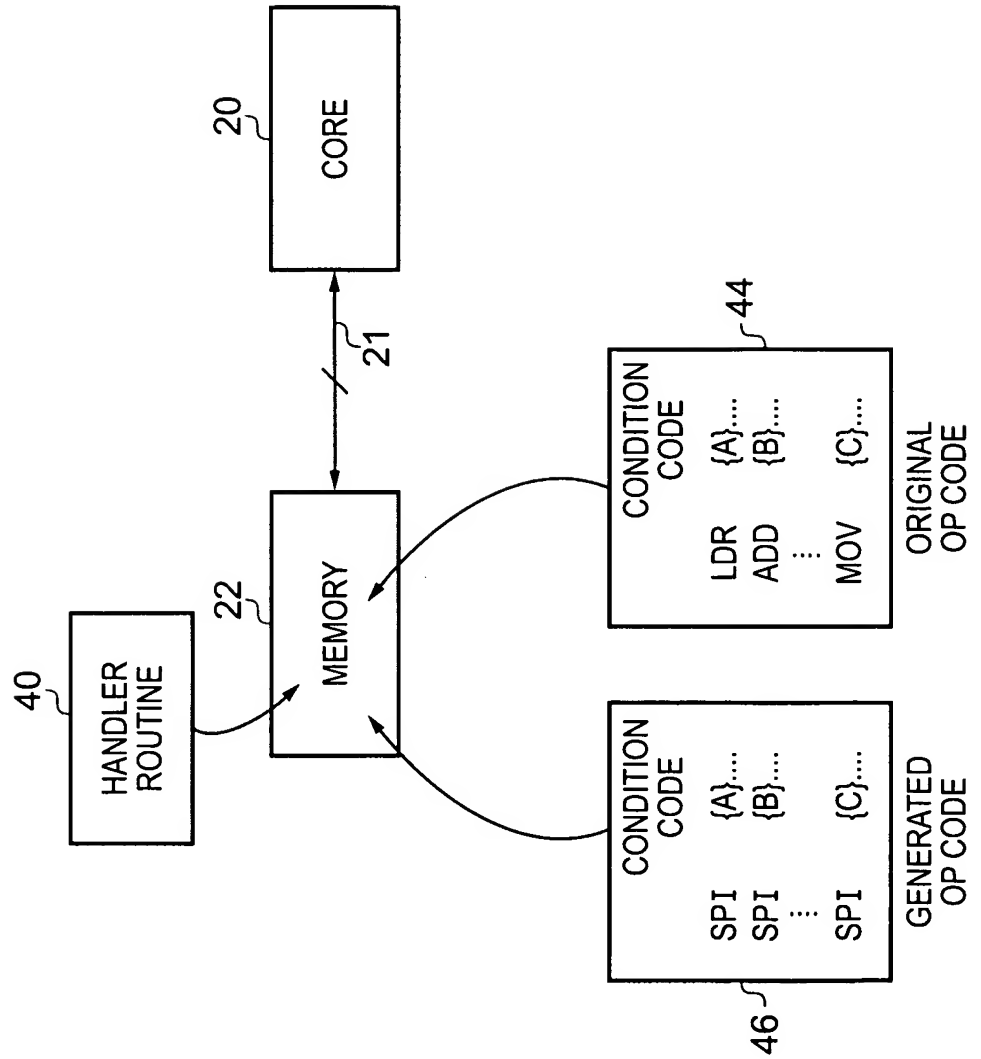
20
CORE
21
22
MEMORY
40
HANDLER ROUTINE
44
CONDITION CODE
{A}....
{B}....
{C}....
LDR
ADD
MOV
ORIGINAL OP CODE
CONDITION CODE
{A}....
{B}....
{C}....
SPI
SPI
SPI
GENERATED OP CODE
46

FIG. 4A

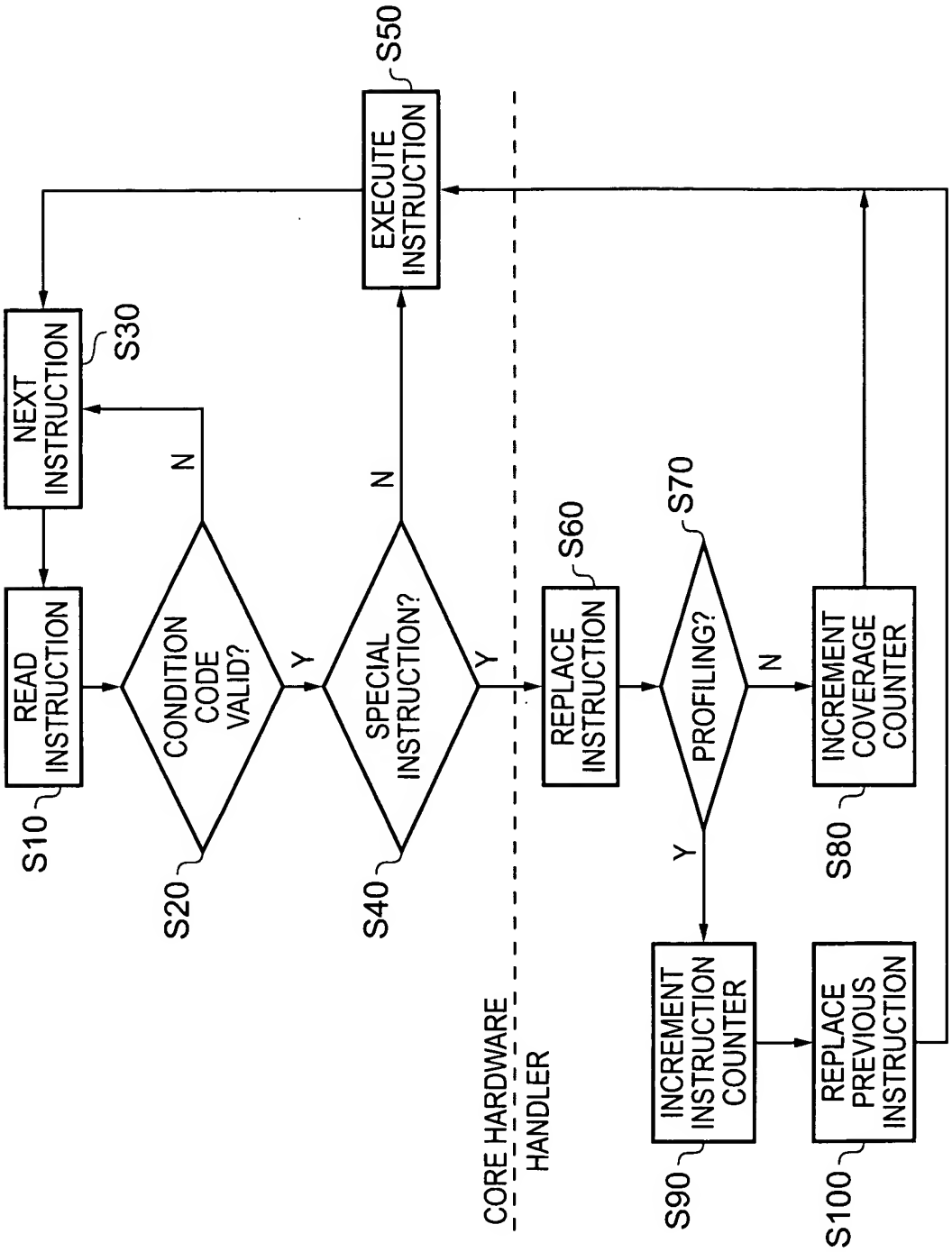
S50
EXECUTE INSTRUCTION
S30
NEXT INSTRUCTION
READ INSTRUCTION
S10
CONDITION CODE VALID?
S20
N
Y
SPECIAL INSTRUCTION?
S40
N
Y
S60
REPLACE INSTRUCTION
S70
PROFILING?
N
Y
INCREMENT COVERAGE COUNTER
S80
INCREMENT INSTRUCTION COUNTER
S90
REPLACE PREVIOUS INSTRUCTION
S100
CORE HARDWARE HANDLER

FIG. 4B

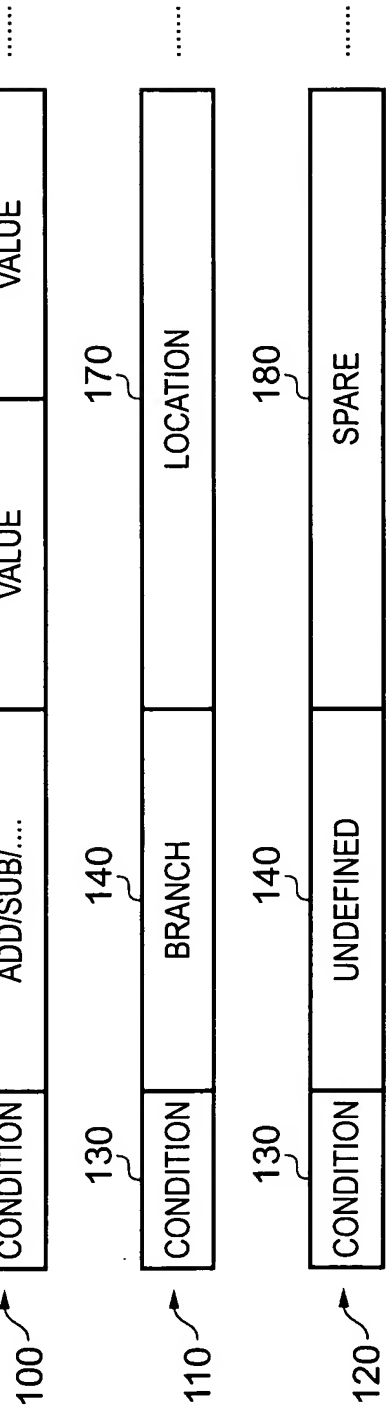
100
110
120
130
CONDITION
140
ADD/SUB/....
BRANCH
UNDEFINED
150
VALUE
170
LOCATION
180
SPARE
160
VALUE

FIG. 5

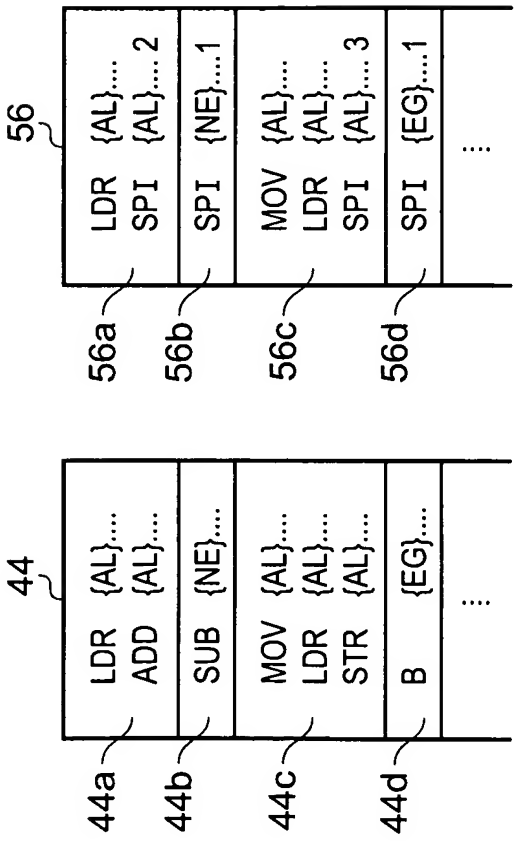
56
LDR {AL}....
SPI {AL}.... 2
SPI {NE}....1
MOV {AL}....
LDR {AL}....
SPI {AL}.... 3
SPI {EG}....1
....
56a
56b
56c
56d
44
LDR {AL}....
ADD {AL}....
SUB {NE}....
MOV {AL}....
LDR {AL}....
STR {AL}....
B {EG}....
....
44a
44b
44c
44d

FIG. 6